



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/581,067

05/31/2006

Franz Schwendemann

3693

2076

7590  
Striker Striker & Stenby  
103 East Neck Road  
Huntington, NY 11743

02/03/2009

EXAMINER

BOES, TERENCE

ART UNIT

PAPER NUMBER

3656

MAIL DATE

DELIVERY MODE

02/03/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/581,067	SCHWENDEMANN, FRANZ	
	<b>Examiner</b>	<b>Art Unit</b>	
	TERENCE BOES	3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the toothed element (20) has a bore formed as a blind bore must be shown or the feature(s) canceled from the claim(s). The examiner notes the bore shown in the drawings is not a “blind” bore due to the claimed through hole (52). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 11 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 recites “a blind bore” while claim 12 recites “a through opening (52)”, rendering the claims indefinite. It is unclear as to how the bore can be “blind” when there is also a through opening (52).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 10, 11, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kretzmer JR US 2,987,349 in view of Leppanen US 7,143,845.

Kretzmer JR discloses:

- a rotor shaft (15), which is supported in a housing (12)
- a separate toothed element (20) for transmitting torque to a gear component (21), wherein said toothed element (20) is secured to the rotor shaft (15),

Art Unit: 3656

- wherein the toothed element (20),
- wherein the toothed element (20) further has an axial bracing face (23), wherein said toothed element is braced on an adjusting element (24) on the housing (12), wherein said adjusting element (24) presses with a predeterminable pressing force against the axial bracing face
- wherein the toothed element (20) has a worm gear (20 is a worm), a cone wheel toothing, or a straight or oblique pinion toothing, which meshes with a further gear element (21)
- wherein the toothed element (20) has a bore (see inside of 20 in figure 1) formed as a blind bore
- wherein a bottom face is disposed on a lower end of the bore (see bottom of bore in 20)

Kretzmer JR discloses a torque transmitting shaft rotationally engaged inside a rotary body. Kretzmer JR does not disclose an axial bearing face which rests on a bottom face of a bore. Leppanen teaches an axial bearing face which rests on a bottom face of a bore (see 80, 83 and 89 in figure 6). Because both Kretzmer JR and Leppanen teach torque transmitting shafts rotationally engaged inside rotary bodies, it would have been obvious to one having ordinary skill in the art at the time of the invention to provide an axial bearing face which resting on a bottom face of a bore for to achieve the predictable result of transmitting torque.

Art Unit: 3656

4. Claims 4, 5, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kretzmer JR US 2,987,349 in view of Leppanen US 7,143,845 as applied to claim 1 above, and further in view of Hunter et al. US 2003/0048969.

Kretzmer in view of Leppanen discloses an axial rotary bearing structure.

Kretzmer in view of Leppanen does not disclose a through opening receiving a ball that has a bracing face. Hunter et al. teaches a through opening (92) receiving a ball (20, 22, 24, 26, see figure 10) that has a bracing face. Because both Kretzmer in view of Leppanen and Hunter et al. teach axial rotary bearing structures, it would have been obvious to one having ordinary skill in the art at the time of the invention to provide a through opening receiving a ball that has a bracing face to achieve the predictable result of axially bearing a rotating member.

5. Claims 6-9, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kretzmer JR US 2,987,349 in view of Leppanen US 7,143,845 in view of Hunter et al. US 2003/0048969 as applied to claim 5 above, and further in view of Ursel et al. US 6,486,577.

Kretzmer in view of Leppanen in view of Hunter et al. discloses all of the claimed subject matter as described above. Kretzmer in view of Leppanen in view of Hunter et al. does not disclose knurling in an axial portion, wherein in the axial region of the knurling the bore has a lesser inside diameter than in regions of the rotor shaft that are without knurling, and a rotor shaft is connected to a toothed element in a region having knurling via a press fit, and in a region without knurling is connected via a clearance fit.

Art Unit: 3656

Ursel et al. teaches knurling (see knurling on shaft 22 between shaft 22 and worm 26) in an axial portion, wherein in the axial region of the knurling the bore has a lesser inside diameter than in regions of the rotor shaft that are without knurling (knurling would deform the bore to have this structure), and a rotor shaft is connected to a toothed element in a region having knurling via a press fit, and in a region without knurling is connected via a clearance fit (see shaft 22 fit into worm 26 in figure 1) for the purpose of forming an improved rotational connection, as is well known in the art.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Kretzmer in view of Leppanen in view of Hunter et al. and provide knurling in an axial portion, wherein in the axial region of the knurling the bore has a lesser inside diameter than in regions of the rotor shaft that are without knurling, and a rotor shaft is connected to a toothed element in a region having knurling via a press fit, and in a region without knurling is connected via a clearance fit, as taught by Ursel et al., for the purpose of forming an improved rotational connection, as is well known in the art.

Kretzmer JR further discloses:

- Wherein the rotor shaft, after an integral forming on the radial bump, is through-ground (product by process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps, see MPEP 2113).
- Wherein the rotor shaft is axially mountable through a bearing sleeve in the housing (shaft is capable of being mounted, in addition see 30)

Regarding claim 13, product by process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps, see MPEP 2113.

### ***Response to Arguments***

6. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TERENCE BOES whose telephone number is (571)272-4898. The examiner can normally be reached on Monday - Friday 9:00 AM - 4:00 PM.

Art Unit: 3656

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Terence Boes/  
Examiner, Art Unit 3656

/Richard WL Ridley/  
Supervisory Patent Examiner, Art Unit 3656